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AUTHOR Etaugh, Claire; Duits, Terri L.
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ABSTRACT

Toddlers (41 girls and 35 boys) between 18 and 37 months of age were given four gender discrimination tasks each consisting of 6 pairs of color drawings. Three of the tasks employed color drawings of preschool girls and boys holding either a sex-typical toy, a sex-atypical toy, or no toy. The fourth employed pictures of sex-typical masculine and feminine toys. The subject's task was to point to the designated target (girl or boy; girl's toy or boy's toy) on each trial. A score of five or more (out of six) correct choices was considered better than chance responding on a given task and was classified as a passing score. Older children performed better than younger children on all tasks. Gender discrimination of pictured children was not enhanced or impaired by adding sex-typical or sex-atypical toys. Only 38 percent of the children passed the task depicting toys alone, while 70 percent passed the tasks portraying children and toys. The results indicated that toddlers' knowledge of sex-role stereotypes for toys is not well developed. (Author)

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DEVELOPMENT OF GENDER DISCRIMINATION:

EFFECT OF SEX-TYPICAL AND SEX-ATYPICAL TOYS

Claire Etaugh and Terri L. Duits

Bradley University

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Abstract

Toddlers (41 girls and 35 boys) between 18 and 37 months of age were given four gender discrimination tasks each consisting of 6 pairs of color drawings. Three of the tasks employed color drawings of preschool girls and boys holding either a sex-typical toy, a sex-atypical toy, or no toy. The fourth employed pictures of sex-typical masculine and feminine toys. The subject's task was to point to the designated target (girl or boy; girl's toy or boy's toy) on each trial. A score of five or more (out of six) correct choices was considered better than chance responding on a given task and was classified as a passing score. Older children performed better than younger children on all tasks. Gender discrimination of pictured children was not enhanced or impaired by adding sex-typical or sex-atypical toys. Only 38 percent of the children passed the task depicting toys alone, while 70 percent passed the tasks portraying children and toys. The results indicated that toddlers' knowledge of sex-role stereotypes for toys is not well-developed.

Development of Gender Discrimination:

Effect of Sex-Typical and Sex-Atypical Toys

Children's gender identity development continues to generate a steady stream of research (Zucker & Yoannidis, 1983). Relatively little is known, however, about the earliest emergence of gender discrimination in toddlers. Between the ages of two and three, children learn to label themselves and others correctly as male or female. Thompson (1975) found that by 24 months of age children "definitely had the ability to identify the different sexes" (p.344). He used a nonverbal gender discrimination task in which subjects could identify pictures manually in response to a number of gender label pairs (boy-girl, man-woman, mommy-daddy, etc.). Kuhn, Nash, and Brucken (1978) also found that two-year-olds demonstrated considerable knowledge of sex role stereotypes that are prevalent in the adult culture. A pool of 72 items involving traits ("I'm strong"), activities ("I like to play ball"), or future roles ("When I grow up I'll fly an airplane") was assembled. The subjects responded by selecting which of two paper dolls, one male and one female, made the statement in each item.

Leinbach (1983) designed a study to test the ability of young children to distinguish females from males and to determine whether children or adults are more readily discriminated. Her study used a picture format, which allowed subjects to respond by touching or pointing to either a stereotypically masculine or feminine photograph of adults and children. Results of this study showed that children were able to identify parent figures before they could distinguish between girls and boys.

In a recent study done by Etaugh, Grinnell, and Etaugh (1985) it was found that gender discrimination improved with age, with a fairly sharp transition from chance to accurate responding occurring at approximately 30 months of age. In this study, subjects were presented with pairs of photographs of preschoolers, young elementary schoolchildren (second and third graders), or young adolescents (seventh and eighth graders) and asked to point to either the boy or the girl. Results of this study showed a slight tendency for pictures of older children to be discriminated better than pictures of younger children.

The fact that toddlers discriminate between pictures of women and men before they dinstinguish between pictures of girls and boys (Leinbach, 1983) and show a tendency to distinguish between pictures of older girls and boys better than between pictures of young girls and boys (Etaugh, Grinnell, & Etaugh, 1985) suggests that gender discrimination in toddlers may be facilitated by gender-linked features which are more apparent in pictures of adults and older children than in pictures of young children. If this is the case, then adding gender-linked cues to pictures of girls and boys should facilitate toddlers' ability to distinguish between them.

In the present study, sex-stereotyped toys were chosen as a gender-linked cue which might facilitate toddler's discrimination of girls and boys. O'Brien and Huston (1985) noted that one of the earliest manifestations of sex typing is play with sex-stereotyped toys. Among children as young as 12 to 18 months old, girls tend to play with soft toys and dolls, while boys tend to play with transportation toys and blocks (Bronson, 1971; Goldberg & Lewis, 1969; Jacklin, Maccoby, & Dick,

1973; Kearsley & Zelazo, 1979; O'Brien, Huston, & Risley, 1981 a, b; Smith & Daglish, 1977) and by 31 months of age children show sex-appropriate preferences in their choice of toys at a consistently high level (Brown & Weinraub, 1980; O'Brien & Huston, 1985).

Children of both sexes show sex-typed toy preferences prior to gender labeling. In one recent study, for example, Weinraub (1984) found that sex-typed toy preferences proceed gender categorization and gender identity, with sex-typed toy preference being reliably observed in children as young as 26 months. It may be that sex-typed toy preferences lead to segregated play before the child is aware of gender labeling (Fagot, Leinbach, & Hagan, 1986). Huston (1985) has stated that very early aspects of sex-typed behavior may develop independently of cognition about gender.

The present study was designed to obtain more precise data on the development of gender discrimination in toddlers by systematically varying the sex-typed toys pictured with preschoolers.

Four hypotheses were tested: (1) Drawings of preschoolers with sex-typical toys will be discriminated more readily than drawings of preschoolers alone or with

sex-atypical toys. (2) Drawings or preschoolers with sex-atypical toys will be discriminated less readily than the drawings of preschoolers alone. (3) Drawings of toys alone will be discriminated less readily than drawings of preschoolers alone, preschoolers with sex-typical toys, or preschoolers with sex-atypical toys. (4) Older toddlers will show better gender discrimination than younger ones. The first hypothesis was generated because sex-typical toys are added gender-linked cues which presumably would facilitate toddlers' gender discrimination. Hypothesis (2) was generated in order to find out if sex-atypical toys will serve as cues which conflict with such gender cues as the pictured child's hairstyle and dress, thus impairing gender discrimination. Hypothesis (3) was based on previous research which suggested that toys alone are less salient gender cues than are such physical attributes as hairstyle and clothing (Zucker & Yoannidis, 1983). Finally, hypothesis (4) was based on previous findings that older toddlers discriminate gender better than do younger ones (e.g. Etaugh, Grinnell, & Etaugh, 1985; Leinbach, 1983).

Method

Subjects

Subjects were 41 girls and 35 boys between 18 and 37 months of age. Thirty-two of the subjects were enrolled in or on a waiting list for a preschool program in a medium-sized Midwestern city; 22 of the children were enrolled in various day care centers; and 22 had no day care or preschool affiliation. Nearly all were from middle-class Caucasian families. Children were divided into three age groups: 18-26-month-olds (mean = 22.96); 27-32-month-olds (mean = 29.97); and 33-37-month-olds (mean = 34.87). The youngest group contained 14 females and 11 males; the middle group had 11 of each sex; and the oldest group had 16 females and 13 males. Girls and boys did not differ significantly in mean age in any group. In the youngest group, the mean age was 23.30 months for males and 22.69 months for females; the mean for the middle group was 30.51 months for males and 29.42 months for females; and for the oldest group the mean was 34.55 months for males and 35.12 months for females.

Materials

Four gender discrimination tasks, each consisting of 6 pairs of 12.7 cm x 17.8 cm color drawings, comprised

the test materials. Three of the tasks employed color drawings of preschool girls and boys holding either a sex-typical toy (e.g. a girl with a doll; a boy with a truck), a sex-atypical toy (e.g. a girl with a truck; a boy with a doll), or no toy. The fourth task consisted of color drawings of pairs of sex-typical masculine and feminine toys (e.g. a doll and a truck). Table 1 provides a description of the color drawings that were used in the gender discrimination tasks.

The models for the 6 pairs of girl-boy drawings in each of the three tasks involving children were 6 pairs of official school photographs of preschoolers which had been used as stimuli in a previous study (Etaugh, Grinnell, & Etaugh, 1985). The photographs portrayed the head to waist of fully clothed Caucasian children who were unfamiliar to the subjects. The photographed girls and boys did not differ significantly in age; their mean was 3.28 years. An artist made three color drawings of each photograph, retaining the same position, features, hair style and clothing, but varying the color of the hair, eyes, and clothing. A recent study by Shakin, Shakin, and Sternglanz (1983) found that young girls typically are dressed in yellow or pink clothes, often adorned with ruffles, lace

Table 1

Gender Discrimination: Four Discrimination Tasks

Task	Color Drawings
1	Six pairs of pictures, one girl and one boy; no toy
2	Six pairs of pictures, one girl and one boy each holding a sex-typical toy
3	Six pairs of pictures, one girl and one boy; each holding a sex-atypical toy
4	Six pairs of toys; one toy in each pair sex-typed as feminine, the other as masculine

or puffed sleeves, whereas boys more often are dressed in blue or red. Based on these findings, the girls were drawn wearing pink, yellow, or pale green dresses with puffed sleeves and decorated with ruffles or lace, while the boys were drawn wearing blue and/or red long-sleeved shirts with collars, pullover sweaters or a combination of both. The pictured girls all had long hair, many with hair bows or barrettes, while the boys had short hair cuts. In one of the three versions of each drawing, the child held a sex-typical toy; in another version, a sex-atypical toy; and in a third version, no toy. Each drawing was unanimously identified as a boy or girl by 16 adult female and male judges.

Choice of sex-typed toys for the study was based on findings that, as early as 12-18 months of age, sex differences in play preferences emerge, with girls preferring soft toys and dolls, toy animals and doll furniture, and boys preferring transportation toys and tools (Bronson, 1971; Goldberg & Lewis, 1969; Jacklin, Maccoby, & Dick, 1973; Kearsley & Zelazo, 1979; O'Brien & Huston, 1985; O'Brien, Huston, & Risley, 1981 a, b; Smith & Daglish, 1977). In the present study, dolls and soft toy animals were chosen as the female sex-typed toys,

while transportation toys (cars, trucks, a train, a tractor) were chosen as the male sex-typed toys. Photographs of these toys from mail-order catalogues served as the basis for the artist's drawings.

Procedure

Following Leinbach's (1983) procedure, pairs of comparable girl-boy pictures (i.e. both with sex-typical toy, or both with sex-atypical toy, or both with no toy), and pairs of feminine and masculine toys were presented on facing pages of a looseleaf notebook. Each member of the pair was designated the target on half of the trials. Order of presentation of the 24 pairs and right or left position of each picture within the pair was varied randomly for each subject.

The experimenter, who sat facing the subject, was unable to see the color drawings. She asked the subject to point to the designated target for that trial ("girl" or "boy" or "girl's toy" or "boy's toy"). The designated target was chosen according to a computer produced random

order. Data sheets which included the designated target for every trial were prepared in advance by a second experimenter. The first experimenter recorded whether the subject indicated the right or left drawing. No feedback regarding success or failure was given. The first experimenter blindly rearranged the drawings for each subject according to a random order generated by the second experimenter. The second experimenter also scored the responses afterward. Thus, the first experimenter was blind to the location of the target drawing and order of presentation of the pairs.

Results

Following the scoring criterion used by Leinbach (1983) and Etaugh, Grinnell, and Etaugh (1985), a score of 5 out of 6 correct choices was considered better than chance responding ($p < .05$) on a given task and was classified as a passing score. The number of correct choices was subjected to an unequal-N 2 x 3 x 4 (Sex of Subject x Age of Subject x Type of Picture) analysis of variance, with repeated measures on the last factor. For this analysis and all subsequent analyses, Tukey's HSD test was used to compare means for all significant main effects and interactions involving three or more means.

The main effect of the sex of the subjects was significant, $F(1,70) = 4.61$, $p < .035$. Overall, girls ($M = 19.80$) were better able to identify the pictures than were boys ($M = 18.26$).

The main effect of the subject's age group also was significant, $F(2,70) = 24.94$, $p < .0001$. The youngest group averaged significantly fewer correct choices on all tasks combined ($M = 15.84$) than either the middle group ($M = 19.82$) or the oldest group ($M = 21.34$). In the 18-to-26-month age group, only one child out of 25 passed all 4 tasks and only 2 children passed 3 out of

the 4 tasks. In the 27-to-32 month old age category 7 children out of 22 passed all 4 tasks and 5 other children passed all but toy alone. In the 33-to-37-month-old age group, 9 children out of 29 passed all 4 tasks and 15 others passed all but toy alone. Figure 1 and Table 2 indicate the proportion of children in each age category who passed each task.

The main effect of the type of picture was significant, $F(3,210) = 20.97$, $p < .0001$. Children performed significantly worse on the Toy Alone task ($M = 3.97$) than they did on each of the other tasks ($M = 5.01$, 5.07, and 4.96) for the Child Alone, Sex-Typical and Sex-Atypical tasks, respectively. Performance on the three other tasks did not differ significantly.

The interaction of Age of Subject x Type of Task was significant, $F(6,210) = 3.35$, $p < .004$. Table 3 presents the mean number of correct responses on each of the four tasks by children in each of the three age groups.

The oldest children did better than the youngest children on identifying the picture of the child alone. The middle age group did better than the youngest age group on identifying the picture of toy alone. Both the oldest

Figure Caption

Figure 1. Proportion of children in each age group who passed each task.

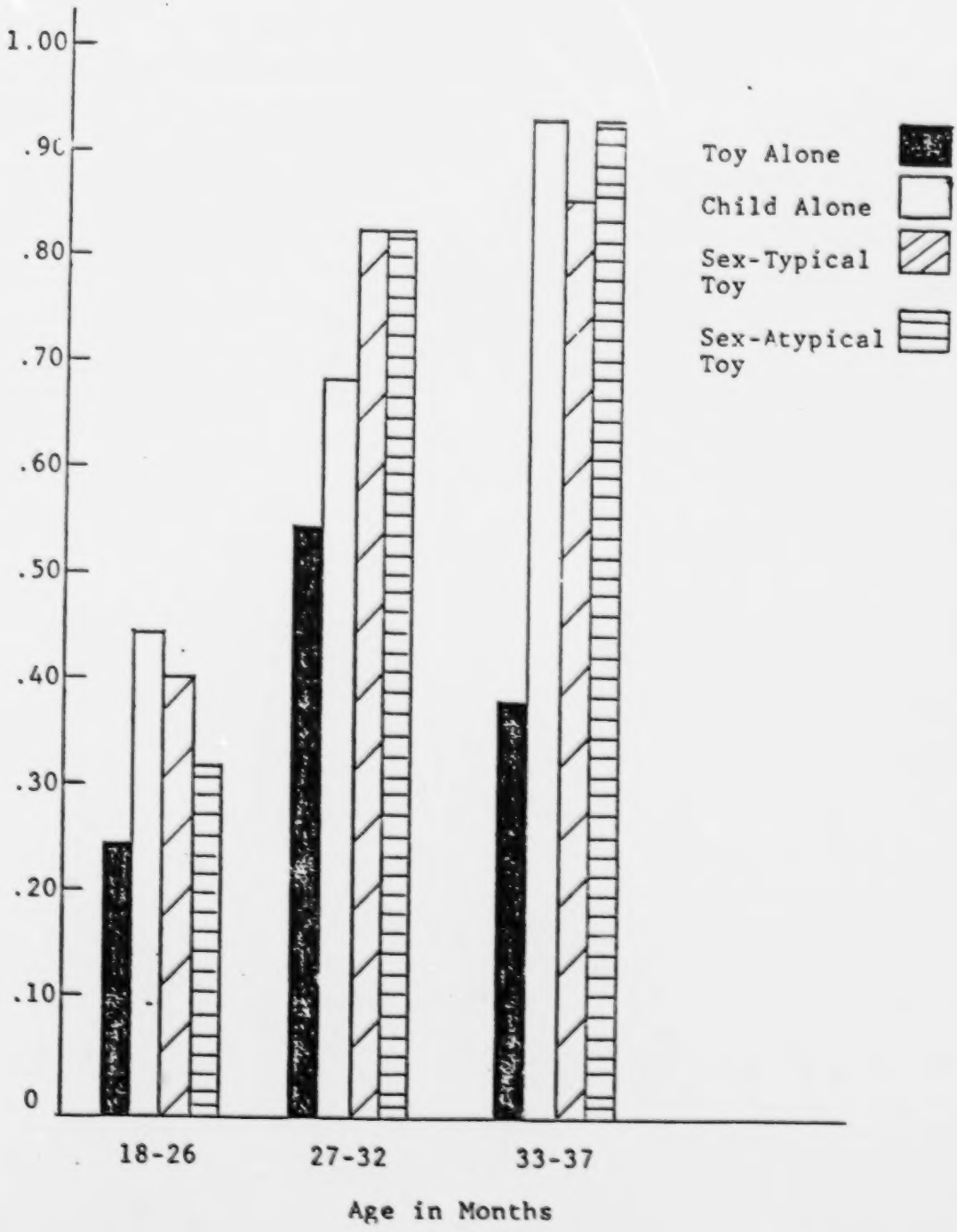
1.00
.90
.80
.70
.60
.50
.40
.30
.20
.10
0
Toy Alone
Child Alone
Sex-Typical Toy
Sex-Atypical Toy
18-26
27-32
33-37
Age in Months

Table 2

Gender Discrimination: Proportion of Children Attaining a Given Number of Correct Responses on Each Task

	Number Correct						
	0	1	2	3	4	5	6
Toy Alone	0	.066	.053	.224	.276	.263	.118
Child Alone	0	0	.066	.053	.184	.197	.500
Sex-Typical Toy	0	0	.066	.105	.132	.118	.579
Sex-Atypical Toy	0	0	.053	.118	.132	.184	.513

Table 3

Gender Discrimination: Mean Number of Correct Responses on Each of the Four Tasks by Children in Each of the Three Age Groups

	Age in Months		
	18-26	27-32	33-37
Toy Alone	3.52	4.50	3.97
Child Alone	4.24	4.95	5.72
Sex-Typical Toy	4.08	5.32	5.72
Sex-Atypical Toy	4.00	5.05	5.72

and the middle age groups were better able to identify the child pictured with a sex-typical toy than were the youngest children. The oldest and the middle age groups also were better able to identify children pictured with a sex-atypical toy than the youngest age group. Children in the middle age category did better at identifying pictures with sex-typical toys than they did at identifying toy alone pictures. The oldest children did worse at identifying the toy alone picture than any of the other tasks.

The interaction of Sex of Subject x Age of Subject x Type of Task was significant, $F(6,210 = 2.44$, $p < .027$. The means for this interaction are shown in Table 4.

The youngest girls did better than the youngest boys at identifying children pictured with a sex-atypical toy. The two sexes performed comparably on all tasks at the other two age levels. Girls in all age groups did worse at identifying toys alone than they did at identifying children alone or children holding sex-atypical toys. The middle age group of girls also did worse at identifying the toy alone than they did at identifying children pictured with sex-typical toys. The oldest boys did worse at identifying the toy alone than they did at

Table 4

Gender Discrimination: Mean Number of Correct Responses on Each of the Four Tasks by Girls and Boys in Each of the Three Age Groups

	Age in Months		
	18-26	27-32	33-37
Toy Alone			
Females	3.36	4.36	4.31
Males	3.73	4.64	3.54
Child Alone			
Females	4.43	5.18	5.81
Males	4.00	4.73	5.62
Sex-Typical Toy			
Females	4.07	5.55	5.81
Males	4.09	5.09	5.62
Sex-Atypical Toy			
Females	4.71	5.55	5.75
Males	3.09	4.55	5.69

identifying children holding either sex-typical or sex-atypical toys.

The oldest girls did better than the youngest girls on identifying pictures of children alone and on children pictured with sex-typical toys. Girls from the middle age category were better than the younger girls at identifying children pictured with sex-typical toys.

The oldest boys did better than the youngest boys on all tasks except the toy alone. The oldest boys did better than the middle age group of boys at identifying children with sex-atypical toys, while boys from the middle age category were better than the youngest boys at identifying children with sex-atypical toys.

An additional 2 x 2 (Sex of Subject x Score on Task: Pass or Fail) analysis of variance was performed for each of the four discrimination tasks, with subjects' age as the dependent variable.

On the three tasks depicting children, the children who failed were significantly ($p < .0001$) younger than those who passed $F(1,70) = 23.81$, 18.31, and 21.59 for the Child Alone, Sex-Typical Toy, and Sex-Atypical Toy

tasks, respectively. Mean ages of the children passing these three tasks, respectively were 31.26, 31.06, and 31.17 months. Mean ages of the children failing the three tasks, respectively, were 25.55, 25.78, and 25.97 months. Children who passed the Toy Alone task (mean = 30.24 months) did not differ significantly from those who failed it (mean = 29.09 months).

Discussion

There was no support provided for the hypothesis that drawings of preschoolers with sex-typical toys would be discriminated more readily than drawings of preschoolers alone or preschoolers with sex-atypical toys. It was originally thought that these sex-typical toys might serve as added gender-linked cues which would facilitate toddlers' gender discrimination. Instead it was found that these toys did not serve to enhance gender discrimination.

No support was provided for the hypothesis that drawings of preschoolers with sex-atypical toys would be discriminated less readily than drawings of preschoolers alone. Toddlers' gender discrimination was apparently not impaired by adding sex-atypical toys to the picture. These toys had been thought to serve as cues which might conflict with the gender-linked cues that were already present in the pictured child (e.g. dress and hairstyle).

The results of the present study did provide support for the hypothesis that drawings of toys alone would be discriminated less readily than drawings of preschoolers alone, preschoolers with sex-typical toys, or preschoolers with sex-atypical toys. Only 38 percent of the children

passed the Toy Alone task, while 70 percent passed each of the tasks portraying children with toys. These results, along with results from previous studies, indicate that toddlers' knowledge of sex-role stereotypes for toys is not well developed. In one recent study, for example, Weinraub et al (1984) found that although sex-typed toy preferences were reliably observed in children as young as 26 months, none of their 26-month-old subjects showed evidence that they were aware that some toys are considered more appropriate for one sex than for another. Even by 36 months of age, fewer than one-third of their subjects demonstrated awareness of sex role stereotypes in the area of childrens' toys. In a study by Blakemore, LaRue, and Olejnik (1979), even though two-year-old boys displayed preferences for masculine toys and activities, not one could identify the toys as being more appropriate for boys than girls. Two-year-old girls neither preferred sex-appropriate toys nor identified them as such. Similar findings were obtained by Perry, White, and Perry (1984). In this study, subjects were presented with 16 pairs of pictured toys (8 masculine toys paired with 8 neutral toys and 8 feminine toys paired with 8 neutral toys). On a preference test, the subjects were asked to indicate

which one of the pictured toys they preferred. On a stereotyping test, subjects were asked to indicate the pictured toy that would be preferred by children of their own sex. The results indicated that 2-year-old boys preferred masculine toys, but were not able to identify them as preferred by other boys (i.e. they did not show sex role stereotypes for toys). Two-year-old girls neither preferred feminine sex-typed toys nor identified them as such. At age 3, the preferences and stereotypes means were significantly greater than chance for both girls and boys, but stereotype scores still had not reached the more stringent "passing" criterion used by Leinbach (1983), Etaugh et al (1985), and the present author. Along the same lines, Coker (1983) found that 3-to-3½-year-old children performed at chance level on a measure of sex-role stereotyping of toys.

Support was shown for the hyopthesis that older toddlers would show better gender discrimination than younger ones. The results showed that the oldest group performed better than the middle group, which in turn outperformed the youngest group. These findings were in line with previous research in this area (e.g. Etaugh et al, 1985; Leinbach, 1983).

Overall, the findings indicated that toddlers' gender discrimination of pictured children is neither enhanced nor impaired by adding sex-typical or sex-atypical toys. It seems that toddlers do not have a well-developed knowledge of sex-role stereotypes for toys.

References

Blakemore, J., LaRue, A., & Olejnik, A. (1979). Sex-appropriate toy preference and the ability to conceptualize toys as sex-role related. Developmental Psychology. 15, 339-340.

Brown, L. M. and Weinraub, M. (1980). Sibling status: Implications for sex-typed toy preferences and awareness of sex-role stereotypes in 2-to-3-year-old children. Paper presented at the meeting of the Society for Research in Child Development, 1981.

Coker, D. (1983). The relationships among gender concepts and cognitive maturity in preschool children. Sex Roles. 10, 19-31.

Etaugh, C. (1983). Introduction: The influence of environmental factors on sex differences in children's play. In M. Liss (Ed.), Social and Cognitive Skills: Sex Roles and Children's Play (pp. 1-15). New York: Academic Press, Inc.

Etaugh, C., Grinnell, K., & Etaugh, A. (1985). Development of gender labeling: Effect of age of pictured children. Paper presented at the meeting of the American Psychological Association, Los Angeles, CA.

Fagot, B., Leinbach, M. D. & Hagan, R. (1986) Gender labeling and the adoption of sex-typed behaviors. Developmental Psychology. 22, 440-443.

Huston, A. C. (1985). The development of sex typing: Themes from recent research. Developmental Review. 5, 1-17.

Kuhn, D., Nash, S. C., & Brucken, L. (1978). Sex role concepts of two-and-three-year-olds. Child Development. 49, 445-451.

Leinbach, M. D. (1983, April). Gender discrimination in toddlers: Identifying pictures of male and female children and adults. Paper presented at the meeting of the Society for Research in Child Development, Detroit, MI.

O'Brien, M. and Huston, A. C. (1985). Development of sex-typed play behavior in toddlers. Developmental Psychology. 21, 866-871.

Perry, D., White, A, & Perry, L. (1984). Does early sex typing result from children's attempts to match their behavior to sex role stereotypes? Child Development. 55, 1-24.

Shakin, M., Shakin, D., & Sternglanz, S. H. (1985). Infant clothing: Sex labeling for strangers. Sex Roles. 12, 955-963.

Thompson, S. K. (1975). Gender labels and early sex role development. Child Development. 46, 339-347.

Weinraub, M., Clemens, L. P., Sockloff, A., Ethridge, T., Gracely, E., & Myers, B. (1984). The development of sex role stereotypes in the third year: Relationships to gender labeling, gender identity, sex-typed preference, and family characteristics. Child Development. 55, 1493-1503.

Zucker, K. and Yoannidis, T. (1983). The relationship between gender labeling and gender constancy in preschool children. Paper presented at the meeting of the Society for Research in Child Development, Detroit, MI.